APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/658,303	09/08/2000	Laura Myers Haas	ARC9-2000-0125-US1	2864

7590 07/01/2005	EXAMINER
John L Rogitz	MAHMOUDI, HASSAN

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Suite 3120	ART UNIT | PAPER NUMBER
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DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE **3** MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 April 2005*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,8-11,17 and 18* is/are rejected.

7)☒ Claim(s) *3-7,12-16 and 19-22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage

           application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Remarks

1. In view of the Appeal Brief filed on 18-April-2005, PROSECUTION IS HEREBY

    REOPENED. New grounds of rejection are set forth below.

    To avoid abandonment of the application, appellant must exercise one of the

    following two options:

    (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply

    under 37 CFR 1.113 (if this Office action is final); or,

    (2) request reinstatement of the appeal.

    If reinstatement of the appeal is requested, such request must be accompanied by

    a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130,

    1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. The applicants' arguments presented in the Appeal Brief (filed on 18-April-2005),

    regarding the declaration for swearing behind the cited reference (Ripley), and the

    arguments regarding lack of support of Ripley's teachings in the provisional

    application cited for Ripley's effective date, have been fully considered. However,

    the new grounds of rejection set forth in this Office Action is based on consideration

    of the applicants' arguments, stating that Ripley does not teach or suggest certain

    limitations of the claims.

3. Claims 1-22 are presently pending in the application, of which claims 1, 9 and 17 are

presented in independent form.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form

the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 8-11 and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated

by Depledge et al (U.S. Patent No. 5,899,988.)

As to claim 1, Depledge et al teaches a computer system (see figure 4 and see

column 4, lines 7-13), comprising:

a general purpose computer (see figure 4), the computer including logic for

undertaking method (see column 5, lines 9-26) acts to map data arranged in a source

schema into a target schema (see figures 1 and 2A, where data table 100 represents

the source schema and bitmap index 200 represents the target schema), the method

acts undertaken by the logic including:

receiving at least one value correspondence, each value correspondence

representing a function for deriving a value of a target attribute from one or more

values of source attributes (see figure 1, data table 100, where "value" is read on

"type" and "potential set" is read on "location");

grouping at least some value correspondences into potential sets (see figure 2A,

where "grouping" is represented in "bitmap" and "potential sets" is read on location

"key");

selecting candidate sets from at least some potential sets (see figure 3, where

"candidate sets" is read on "location East" or "location South");

grouping at least some candidate sets into covers (see figure 3, where "a cover" is

read on the bitmap for the location); and

using at least one cover, generating at least one query representing a source

schema-to-target schema mapping (see figure 3, where the "mapping" is depicted as

"100110" or the query result, element 302.)

As to claims 2 and 11, Depledge et al teaches wherein the method acts undertaken

by the logic to execute the grouping act include:

grouping value correspondences into potential sets such that, for each potential

set, at most one value correspondence per target attribute exists (see figure 2A, where

at most one value in each of the bitmap set represents each location.)

As to claim 8, Depledge et al teaches wherein the logic incrementally undertakes

the acts of grouping value correspondences into potential sets (see figure 2A, where

"grouping" is represented in "bitmap" and "potential sets" is read on location "key"),

selecting candidate sets (see figure 3, where "candidate sets" is read on "location

East" or "location South"), grouping candidate sets into covers (see figure 3, where "a

cover" is read on the bitmap for the location), and generating queries representing

mappings (see figure 3, where the "mapping" is depicted as "100110" or the query

result, element 302.)

As to claim 9, <u>Depledge et al</u> teaches a computer-implemented method (see

Abstract) for generating a mapping from a source schema to a target schema,

comprising:

generating a mapping based on at least a subset of value correspondences each

value correspondence representing a function for deriving a value of a target attribute

from one or more values of source attributes (see figure 2A);

allowing a user, in a user interaction, to incrementally add or delete a value

correspondence from the subset (see column 8, lines 24-37 and see column 9, lines

41-54);

based on the user interaction, generating a new mapping (see figure 3);

presenting a representation of the new mapping to the user such that the user can

view the representation (see display 421 in figure 4, and see column 5, lines 26-39);

and

permitting the user to add or delete a value correspondence embodied in the new

mapping to generate another mapping (see figure 3 and see column 8, lines 24-37 and

see column 9, lines 41-54.)

As to claim 10, <u>Depledge et al</u> teaches wherein the generating act includes:

grouping at least some value correspondences into potential sets (see figure 2A, where "grouping" is represented in "bitmap" and "potential sets" is read on location "key");

selecting candidate sets from at least some potential sets (see figure 3, where "candidate sets" is read on "location East" or "location South");

grouping at least some candidate sets into covers (see figure 3, where "a cover" is read on the bitmap for the location); and

using at least one cover, generating at least one query representing a source schema-to-target schema mapping (see figure 3, where the "mapping" is depicted as "100110" or the query result, element 302.)

As to claim 17, <u>Depledge et al</u> teaches computer program device (see Abstract, and see figure 4) comprising:

a computer program storage device readable by a digital processing apparatus (see paragraph 125); and

a program on the program storage device (see storage device 407 in figure 4) and including instructions (see column 5, lines 9-25) executable by the digital processing apparatus (see processor 402 in figure 4) for performing method acts for representing a source schema-to-target schema mapping (see figures 1 and 2A, where data table 100 represents the source schema and bitmap index 200 represents the target schema), the program comprising:

computer readable code means (see column 5, lines 9-25.)

For the remaining steps of this claim, the candidate is kindly directed to remarks

and discussions made in claims 1 and 9 above.

As to claim 18, <u>Depledge et al</u> teaches the program product further comprising

computer readable code means (see column 5, lines 9-25) for sorting the subsets and

displaying at least portions of a sorted list of subsets (see display 421 in figure 4, and

see column 5, lines 26-39), such that a user can establish a selected subset used to

generate the query (see figure 3.)

Allowable Subject Matter

6. Claims 3-7, 12-16, and 19-22 are objected to as being dependent upon a rejected base

   claim, but would be allowable if rewritten in independent form including all of the

   limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record, <u>Ripley</u> (U.S. Publication No. 2002/0023097) and

<u>Morgenstern</u> (U.S. Patent No. 5,970,490), do not disclose, teach, or suggest the

claimed limitations of (in combination with all other features in the claim):

wherein the method acts undertaken by the logic further include:

adding a potential set to a set of candidate sets if only one source relation is used

to compute mappings using the potential set; otherwise

adding a potential set to the set of candidate sets only if a join path for the source

relations can be identified, as recited in dependent claims 3 and 12.

Claims 4-7 are objected to because they are dependents from the objected to

dependent claim 3.

Claims 13-16 are objected to because they are dependents from the objected to

dependent claim 12.

The prior art of record, Ripley (U.S. Publication No. 2002/0023097) and

Morgenstern (U.S. Patent No. 5,970,490), do not disclose, teach, or suggest the

claimed limitations of (in combination with all other features in the claim):

wherein the means for generating subsets generates candidate sets, each subset

including one or more candidate sets and the means for sorting sorts the subsets by

inverse number of candidate sets, as recited in dependent claim 19.

Claims 20-22 are objected to because they are dependents from the objected to

dependent claim 19.

Response to Arguments

8. Applicant's arguments filed on 18-April-2005 have been fully considered but they are

moot in view of the new grounds of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

The following patents are cited to further show the state of art with respect to

mapping and conversion of source schema to target schema in general:

Patent/Pub. No.	Issued to	Cited for teaching
US 6,523,172	Martinez-Guerra et al.	Source-Target schema and queries.
US 20020059566A1	Delcambre et al	Source-Target schema, mapping and conversion.

10. Any inquiries concerning this communication or earlier communications from the

examiner should be directed to Tony Mahmoudi whose telephone number is (571)

272-4078. The examiner can normally be reached on Mondays-Fridays from 08:00

am to 04:30 pm.

tm

June 18, 2005

C. Rones

CHARLES RONES
Supervisory **PRIMARY EXAMINER**